

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Canceled).

Claim 2 (Currently amended): The separator of claim ~~[[1]]~~ 25,
~~characterized in that~~ wherein the shutdown layer is ~~formed by~~ at least one selected
from the group consisting of a woven, a nonwoven, a felt, a formed-loop knit ~~or~~ and a porous
film.

Claim 3 (Currently amended): The separator of claim ~~[[1]]~~ 25, wherein
~~characterized in that~~
the separator is bendable down to a radius of 0.5 mm, and
the carrier is ~~[[flexible and]]~~ less than 50 μm in thickness.

Claim 4 (Currently amended): ~~[[A]]~~ The separator according to claim 3, wherein
~~characterized in that~~ the carrier is a ~~polymeric~~ nonwoven comprising polymeric fibers.

Claim 5 (Currently amended): The separator of claim ~~[[1]]~~ 25, wherein
~~characterized in that~~ the polymeric fibers of the carrier are selected from fibers of the
group consisting of polyacrylonitrile, polyester, ~~and/or~~ polyamide and mixtures thereof.

Claim 6 (Currently amended): The separator of claim ~~[[1]]~~ 25, wherein
~~characterized in that~~ the shutdown layer is from 1 to 20 μm in thickness.

Claim 7 (Currently amended): The separator of claim ~~[[1]]~~ 25, wherein

~~characterized in that~~ the shutdown layer ~~consists of~~ comprises ~~[[a]]~~ at least one material selected from the group consisting of ~~from~~ polymers, polymer blends, natural or artificial waxes ~~[[or]]~~ and mixtures thereof.

Claim 8 (Currently amended): The separator of claim ~~[[1]]~~ 25, wherein
~~characterized in that~~ the shutdown layer consists of a material which has a melting temperature of less than 130°C.

Claim 9 (Currently amended): The separator of claim ~~[[1]]~~ 25, wherein
~~characterized in that~~ the material of the shutdown layer and at least portions of the material of the carrier are identical.

Claims 10-11 (Canceled).

Claim 12 (Currently amended): The process of claim ~~[[10]]~~ 26, further comprising
~~wherein treating~~ the porous inorganic nonconductive coating layer ~~is hydrophobicized~~
with a hydrophobicing agent before fixing the porous sheet shutdown layer ~~is applied to it.~~

Claim 13 (Currently amended): The process of claim ~~[[10]]~~ 26, further comprising
treating ~~wherein~~ the porous inorganic coating layer ~~is treated~~ with an adhesion promoter
before fixing the porous sheet shutdown layer ~~is applied to it.~~

Claim 14 (Currently amended): ~~[[A]]~~ The process according to claim 13,

wherein the ~~porous inorganic layer is produced by using a polymeric sol~~ is a polymeric sol comprising a silane adhesion promoter for the shutdown layer to be applied later.

Claim 15 (Currently amended): The process of claim 13,
wherein the adhesion promoter is ~~selected from a~~ hydrolyzed or nonhydrolyzed functionalized ~~alkyltrialkoxysilanes~~ alkyltrialkoxysilane.

Claim 16 (Currently amended): The process of claim [[10]] 26,
wherein the porous sheet shutdown layer ~~is created by applying~~ comprises a woven, formed-loop knit, felt, nonwoven or porous film ~~to the porous inorganic layer~~.

Claim 17 (Currently amended): The process of claim [[10]] 13,
wherein fixing the porous sheet shutdown layer comprises
~~the shutdown layer applied to the porous inorganic layer is heated~~ heating once to a temperature above 50°C and below the melting temperature of the material of the porous sheet shutdown layer so that the shutdown layer are adhered to the separator via the adhesion promoters.

Claim 18 (Currently amended): The process of claim [[10]] 26,
wherein fixing the porous sheet shutdown layer comprises
~~the shutdown layer applied to the porous inorganic layer is fixed by single heating~~ once to a temperature above the glass transition temperature of the porous sheet shutdown layer to incipiently melt the material without changing the actual shape.

Claim 19 (Currently amended): The process of claim [[10]] 26,
wherein fixing the porous sheet shutdown layer comprises
~~the shutdown layer is applied to the porous inorganic layer by laminating~~ the porous sheet
shutdown layer to the porous inorganic nonelectroconductive coating.

Claim 20 (Currently amended): The process of claim [[10]] 26,
wherein fixing the porous sheet shutdown layer comprises applying the porous sheet
shutdown layer ~~is applied~~ to the porous inorganic nonelectroconductive coating layer and
~~fixed by~~ being trapped in a coil wound during battery fabrication.

Claim 21 (Currently amended): The process of claim [[10]] 26,
wherein
[[the]] a material for the porous sheet shutdown layer is at least one selected from the
group consisting of polymers, polymer blends[[,]] and natural and/or artificial waxes, and
the material ~~to have~~ has a melting temperature of less than 180°C.

Claim 22 (Currently amended): [[A]] The process according to claim 21,
wherein the porous sheet shutdown material ~~used~~ is polyethylene.

Claim 23 (Currently amended): ~~The use of~~ A method for the production of a lithium
battery comprising employing the separator of claim [[1]] 25 as a separator in the lithium
~~batteries~~ battery.

Claim 24 (Currently amended): A lithium battery comprising the separator of claim
[[1]] 25.

Claim 25 (New): An electrical separator for a lithium battery comprising:
a porous carrier;
a porous inorganic nonelectroconductive coating on a surface and in the pores of the porous carrier; and

a porous shutdown layer on the porous inorganic nonelectroconductive coating;
wherein

the porous carrier is nonelectroconductive and has a porosity greater than 50%,
the porous inorganic nonelectroconductive coating comprises particles of at least one selected from the group consisting of an oxide of Al, an oxide of Si and an oxide of Zr, the particles have an average particle size in the range from 0.5 to 10 μm , and in the porous inorganic nonelectroconductive coating the particles are adhered together by an oxide of Al, Si or Zr, and

the porous shutdown layer comprises a sheet of materials selected such that the shutdown layer will melt at a temperature determined as the shutdown temperature of the electrical separator.

Claim 26 (New): A process for producing the electrical separator for a lithium battery according to Claim 25, comprising:

preparing a suspension of inorganic nonelectroconductive particles in a sol;
applying the suspension to the surface and pores of a porous carrier to coat the carrier;
drying the coated carrier to form a porous inorganic nonelectroconductive coating on the surface and in the pores of the porous carrier; and
fixing on the porous inorganic nonelectroconductive coating a porous sheet shutdown layer;

wherein

the porous carrier is nonelectroconductive and has a porosity greater than 50%,
the inorganic nonelectroconductive particle comprises at least one oxide selected from the group consisting of an oxide of Al, an oxide of Si and an oxide of Zr,
the particles have an average particle size in the range from 0.5 to 10 μm ,
the sol comprises a hydrolysis product of a compound of Al, Si or Zr, and
the porous sheet shutdown layer comprises materials selected such that the shutdown layer will melt at a temperature determined as the shutdown temperature of the electrical separator.